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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,939	04/05/2004	Fred Buchali	Q80563	3035
72875                      7590                      03/30/2010 SUGHRUE MION, PLLC 2100 Pennsylvania Avenue, N.W. Washington, DC 20037				
EXAMINER				
TRAN, DZUNG D				
ART UNIT		PAPER NUMBER		
2613				
NOTIFICATION DATE		DELIVERY MODE		
03/30/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTO@sughrue.com

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### Office Action Summary

**Application No.**

10/816,939

**Applicant(s)**

BUCHALI, FRED

**Examiner**

Dzung D. Tran

**Art Unit**

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 January 2010.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3, 4, 6 and 7 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1, 3, 4, 6 and 7 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SI/08)  
4) ☐ Interview Summary (PTO-413)  
5) ☐ Notice of Interval Patent Application  
6) ☐ Other: \_\_\_\_\_  
Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

***Specification***

***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "an opto-electrical conversion unit" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 3-4, 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brewer et al. US Patent no. 7,386,042 in view of Kanesaka US Publication no. 2003/0020987.

Regarding claim 1, Brewer discloses in Figure 1, a receiver comprising:

a frequency multiplier unit which frequency-multiplies the converted electrical data signal wherein phase locked loop in frequency multiplier ensure that the data clock is phase locked to the symbol clock (i.e., col. 3, lines 33-58 discloses clock converter 101 generates a pulse train wherein the pulse train is frequency multiplied by an integral factor); and

a clock recovery unit comprising a phased locked loop circuit 103;

wherein the frequency multiplied signal is used to drive the phased locked loop circuit 103 (see Figure 1)

wherein the frequency multiplier unit performs a frequency multiplication by a factor of  $n$ , with  $n$  being a natural number larger than 2 (col. 3, lines 55-58);

wherein said frequency multiplication is an analog signal processing technique (Figure 1).

Brewer does not specifically disclose an opto-electrical conversion unit which converts an optical signal that is received from a source external to said receiver device, to a converted electrical data signal wherein the receiver device comprises a frequency filter for the spectral power of the electrical data signal, and wherein the frequency filter transmits around  $B/n$ , wherein  $B$  is the bit rate of the electrical data signal.

Kanesaka discloses an opto-electrical conversion unit which converts an optical signal that is received from a source external to said receiver device, to a converted electrical data signal wherein the receiver device comprises a frequency filter for the spectral power of the electrical data signal, and wherein the frequency filter transmits around  $B/n$ , wherein  $B$  is the bit rate of the electrical data signal (abstract, claim 20 of page 10).

At the time of the invention was made, it would have been obvious to an artisan to include the teaching of Kanesaka in the system of Brewer. One of ordinary skill in the art would have been motivated to do that in order to generate a clock signal having higher signal rate for the high speed data signal.

Regarding claim 3, Brewer discloses wherein  $n = 4$  (col. 3, lines 55-58).

Regarding claim 6, the combination of Brewer and Kanesaka discloses the clock recovery unit comprises a filter clock recovery circuit (Figure 10 of Kanesaka).

Regarding claim 7, the combination of Brewer and Kanesaka discloses the data transmission system comprises an optical transmission link 3, 4 of Figure 1A of Kanesaka, wherein transmission link has a significant dispersion (it is inherently that

dispersion occurs in the optical fiber link wherein the amount of dispersion is proportional to the length of the fiber).

Regarding claim 4, the combination of Brewer and Kanesaka discloses an optical system for transmitting and receiving various optical transmission bit rate (paragraph 0003 of Kanesaka). Therefore, it can be used for transmitting and receiving optical data signals of 10 Gb/s or 40 Gb/s. Examiner takes an official notice that optical data signals of 10 Gb/s or 40 Gb/s is well known in the art.

#### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1 and 3-4, 6-7 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vanderpuye Kenneth, can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dzung Tran  
03/25/2010

/Dzung D Tran/

Primary Examiner, Art Unit 2613